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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* YOSHINORI KUMASAKA

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Appeal 2008-5271  
Application 09/595,256  
Technology Center 3700

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Decided: January 16, 2009

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Before TONI R. SCHEINER, ERIC GRIMES, and RICHARD M.  
LEBOVITZ, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's rejection of claims 1-6 and 8 as obvious. Jurisdiction is under 35 U.S.C. § 6(b). We affirm.

## STATEMENT OF THE CASE

The claims are directed to a disposable diaper. Claims 1-6 and 8 are pending and stand rejected by the Examiner as follows:

Claims 1-6 under 35 U.S.C. § 102(b) as anticipated by Kato (US Pat. 5,601,547, Feb. 11, 1997) (Ans. 3); and

Claim 8 under 35 U.S.C. § 103(a) as obvious in view of Kato, Kimberly-Clark (EP 0 688 550 A1, Dec. 27, 1995), and Daniels (US Pat. 4,397,646, Aug. 9, 1983) (Ans. 6).

For the anticipation rejection, we select claim 1 as representative since claims 2-6 depend on claim 1 and incorporate all its limitations. Claims 1 and 8 read as follows:

1. A disposable diaper comprising:
  - a topsheet;
  - a backsheet;
  - a front waist region extending between and to transversely opposite side edges of the disposable diaper;
  - a rear waist region extending between and to the transversely opposite side edges of the diaper;
  - a crotch region located longitudinally between the front waist region and the rear waist region;
  - a waist-hole; and
  - a pair of leg-holes, said diaper further comprising:
    - at least one of said front and rear waist regions including a covering zone formed integrally with said crotch region, said covering zone including a longitudinal end at which longitudinal ends of each of said topsheet and backsheet are superimposed together continuously between the transversely opposite side edges of the diaper without any intervening structure between the topsheet and backsheet, said covering zone further including a terminal longitudinal edge which coincides with terminal longitudinal edges of each of said topsheet and backsheet, said at least one of said front and rear waist regions further including an elastic zone extending

continuously along a full length in a circumferentially direction of said at least one of said front and rear waist regions to define at least part of said waist-hole, said elastic zone having a width defined in a longitudinal direction and attached to said covering zone so that a major portion of the width of said elastic zone extends beyond the terminal longitudinal edge of said covering zone, said elastic zone being nonmonolithically formed with the covering zone,

said elastic zone including a first member that is elastically stretchable in said circumferential direction of said at least one of said front and rear waist regions to a length greater than a transverse length of said covering zone, said first member extending between and to the transversely opposite side edges of the diaper, and a second member covering said first member, said second member also extending between and to the transversely opposite side edges of the diaper; and

said second member being inelastically stretchable to a length greater than the transverse length of said covering zone and attached to the terminal longitudinal edge of said covering zone so as to form gathers that extend along the entire length of said at least one of said front and rear waist regions in the circumferential direction between and to each of the opposite side edges of the diaper.

8. The diaper according to Claim 1, wherein each of said leg-holes comprises a covering zone integral with said crotch region and a continuous elastic zone extending along a full length in a circumferential direction of each of said leg-holes, said elastic zone including a third member that is elastically stretchable in said circumferential direction of each of said leg-holes and a fourth member securing and covering said third member, said fourth member being inelastically stretchable to a length greater than said length in said circumferential direction of each of said leg-holes and joined to an outer side edge of each of said leg-holes.

## ISSUE

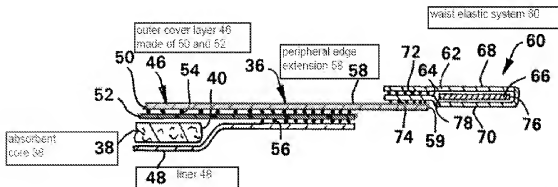
Does Kato describe a disposable diaper having a “covering zone further including a terminal longitudinal edge which coincides with terminal longitudinal edges of each of said topsheet and backsheet” as in claim 1?

## PRINCIPLES OF LAW

The Examiner bears the burden of presenting a *prima facie* case of anticipation. *In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986). Only if that burden is met, does the burden of going forward shift to the applicant. *In re King*, 801 F.2d at 1327. Once a *prima facie* case is established and rebuttal evidence is submitted, the ultimate question becomes whether, based on the totality of the record, the Examiner carried his burden of proof by a preponderance of the evidence. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)

## FINDINGS OF FACT (FF)

1. Kato describes a child's disposable absorbent training pants with an elastic waist system (Kato, Abstract).
2. Figure 2 of Kato, reproduced below with annotations (boxed text), shows a cross-section of the waist border 36 of a disposable pants:



“FIG. 2 is a cross-section through the waist of the pant in FIG. 1 illustrating one embodiment of the present invention” (Kato, at col. 2, ll. 51-52).

3. “Waist border 36 (FIG. 2) may also be a multi-layer structure comprising outer cover layer 46 and liner 48. Waist border 36 *desirably* includes an extension of one of the layers of chassis 22, for example, an extension of outer layer 50 (FIG. 2). This extension forms a peripheral edge portion 58 that peripherally surrounds waist opening 30” (Kato, at col. 4, ll. 55-60) (emphasis added). The extension is attached to the elastic waist system 60 (*id.*).

4. Because Kato uses the term “desirably” to characterize the presence of the single layer extension 58, persons of ordinary skill in the art would have understood that there are less desirable configurations which lack the extension (Ans. 4).

5. “*Desirably*, waist elastic system 60 is joined to only one of the layers comprising chassis 22, such as outer layer 50” (Kato, at col. 5, ll. 19-21) (emphasis added).

6. In manufacturing the absorbent diaper, Kato describes a base layer 98 as the outer cover (corresponding to the “backsheet” of instant claim 1) and a top layer 108 as the liner (corresponding to the “topsheet” of instant claim 1) (Kato, at col. 33, ll. 16-32). Kato states: “Top layer 108 may be smaller in transverse width than base layer 98, and thus may not be in contact with elastic composites 97, 112” which form the waist elastic system 60 (*id.* at col. 33, ll. 29-32).

7. Since the top layer “may be” smaller, it would be reasonably inferred by persons of skill in the art that the top layer may also *not* be smaller than the

base layer in certain circumstances and therefore would comprise a top layer and base layer with coincident edges (Ans. 4).

8. Appellant does not dispute the Examiner's finding that U.S. Patent Nos. 4,940,464 ("464") and 4,641,381 ("381"), referenced in Kato as describing "other representative training pants" (Kato, at col. 4, 61-67), "show terminal edges of topsheet and backsheet [which] coincide" (Ans. 4).

9. In describing prior art training pants, Kato states that "the elastic waistbands generally are joined to multiple layers of material. For example, the elastic waistbands can be adhesively joined between two adjacent layers of material, such as, for example, the topsheet and backsheet of the training pant" (Kato, at col. 2, ll. 9-13).

10. Kato also states:

The present invention provides an improved waist elastic system for children's training pants that results in a substantially uniform low tension along the peripheral border of the waist opening over a wide size range, a more comfortable fit, and improved ease of use by the child . . . This is accomplished by, among other things, reducing the number of layers of material, i.e., the mass or amount of material, that the waist elastic system must gather. The more material there is to gather, the more the elasticity will be degraded or reduced in gathering the excess material. The present invention reduces this number of layers or amount of material to be gathered by incorporating an elastic member in, for example, one layer of material, thereby reducing loss of elasticity.

(Kato, at col. 4, ll. 3-15.)

#### ANTICIPATION REJECTION

The issue in this rejection is whether Kato describes a disposable diaper which comprises a covering zone that includes a "topsheet and backsheet" with "a terminal longitudinal edge which coincides with terminal

longitudinal edges of each of said topsheet and backsheet” as recited in claim 1. As we interpret the claim, the topsheet and backsheet ends both terminate together (“coincide” or are “coincident”) to form a single longitudinal edge.

It is undisputed that Kato describes an embodiment of a disposable absorbent training pants that comprises an outer layer 46 and liner 48 – a “backsheet” and “topsheet”, respectively, as in claim 1 – in which the outer layer 46 extends beyond the terminal edge of the liner 48 to form an extension 58 which is joined to the waist elastic system 60 (FF2, 3). This is shown in Figure 2, reproduced above. The Examiner takes the position that Kato also discloses an embodiment in which the waist border lacks the extension 58 and therefore would have the topsheet and backsheet ends coincide to form a terminal longitudinal edge as required by claim 1.

The Examiner has the burden of providing sufficient evidence to establish that the claimed subject matter is anticipated by the prior art. *In re King*, 801 F.2d at 1327. In this case, the Examiner provided evidence that the claimed feature of coincident topsheet and backsheet edges was known in the prior art:

- U.S. Patent Nos. 4,940,464 (“’464”) and 4,641,381 (“’381”), referenced in Kato as describing “other representative training pants” (Kato, at col. 4, 61-67; FF8), “show terminal edges of topsheet and backsheet [which] coincide” (Ans. 4; FF8). Appellant does not dispute this fact.

The Examiner also provided evidence, as follows, that the single layer extension 58 of the outer cover 46 as shown in Kato’s Figure 2, while preferred, is not the only described embodiment:



- Kato states that the waist border 36 “desirably includes an extension of one of the layers” of the training pants chassis (Kato, at col. 4, ll. 55-60; FF3). Because Kato uses the term “desirably” to characterize the presence of the single layer extension, the Examiner reasonably concludes that there are less desirable configurations which lack the extension and therefore would have coincident edges (FF4; Ans. 4).

- In describing the manufacture of a disposable training pants, Kato states that the topsheet (“top layer 108”) “may be smaller in transverse width than” the backsheet (“base layer 98”) (Kato, at col. 33, ll. 29-32; FF6). The Examiner finds that since the topsheet (“top layer 108”) “may be” smaller, it would be reasonably inferred that the topsheet may also *not* be smaller than the backsheet (base layer 98) and therefore would comprise a topsheet and backsheet with coincident edges as required by claim 1 (Ans. 4; FF6, 7).

This evidence is sufficient to support *prima facie* anticipation. The Examiner makes a logical, fact-based case that persons of ordinary skill in the art reading the phrases “desirably includes” (FF3, 4) and “may be smaller” (FF6, 7) would have recognized alternative, albeit less desired, embodiments in which the waist region lacked the extension 58 – embodiments which would meet the claimed limitation in dispute. Thus, the burden properly shifted to Appellant to provide rebuttal evidence. *In re King*, 801 F.2d at 1327.

Appellant contends that Kato does not teach training pants (i.e., a diaper as in claim 1) with coincident topsheet and backsheet edges. Appellant states: “Quite simply” Kato “teaches two embodiments of the waist portion of the pants which are shown in Figs. 2 and 3” (App. Br. 10).

It is true that Kato describes embodiments in which the waist region has a single layer extension (FF2, 3) which do not anticipate claim 1. However, the Examiner's position is that the single layer extension is not required by Kato and that Kato describes training pants which lack it (Ans. 4). The Examiner's reasoning is based on a close reading of the text of the Kato patent (FF4, 7; Ans. 4).

Appellant does not offer an alternative explanation for Kato's apparent statements that the single layer extension is optional, e.g., that it is "desirably" included in the training pants, but not always. For instance, Appellant states that the "reference 'may be smaller' has to be considered in the context of" the complete sentence (App. Br. 12) that the "[t]op layer 108 may be smaller in transverse width than base layer 98, and thus may not be in contact with elastic composites 97,112" (Kato, at col. 33, ll. 29-32; FF6). However, the remaining part of the sentence simply clarifies that, when the top layer is smaller, it does not contact the elastic system – as illustrated by the configuration shown in Kato's Figure 2. Appellant does not explain how this sentence is inconsistent with the Examiner's position that "may be smaller" implies embodiments in which it is not smaller – embodiments which were apparently known in the prior art (FF8-9).

Appellant cites Kato's teaching of the importance of reducing the number of layers to which the elastic system is attached in order to preserve elasticity (App. Br. 12-13; FF10). Thus, Appellant contends that Kato "expressly teaches away from" attaching the elastic zone to a portion of the diaper body in which the outer layer and liner "would overlap or extend co-extensively" (App. Br. 12).

We agree with Appellant that Kato teaches the undesirability of additional layers in the elastic region (*see* FF10). However, this teaching does not negate Kato's disclosure of less preferred embodiments in which the topsheet and backsheet are coincident as in instant claim 1. Kato's repeated mention that the waist region "desirably" consists of only one layer joined to the waist elastic (FF3, 5) would be understood in the context of Kato's disclosure of prior art waistbands comprising multiple layers (FF8-9) to be an express teaching of less desirable coincident terminal edges. Appellant has not provided a rebuttal explanation.

Appellant's argument about Kato "teaching away" from the claimed invention is couched in terms of obviousness (App. Br. 13), when the rejection is anticipation. If Appellant means to imply that persons of ordinary skill in the art would not have understood Kato's training pants to have multiple layers joined to the waist elastic because it teaches that a single layer is necessary to preserve elasticity (*see* FF10), we are not so persuaded. Kato's express recitation of the term "desirably" to describe the use of the single layer extension (FF3, 5) is a clear statement of an alternative embodiment which covers the claimed limitation.

Because Appellant has not provided rebutted the Examiner's *prima facie* case, we affirm the anticipation rejection of claim 1.

#### OBVIOUSNESS REJECTION

Claim 8 stands rejected under 35 U.S.C. § 103(a) as obvious in view of Kato, Kimberly-Clark, and Daniels.

The Examiner states that the difference between claim 8 and Kato is that Kato does not describe leg holes in its training pants with the claimed elastic zone structure (Ans. 6). However, the Examiner finds Kimberly-

Clark and Daniels teach that it was well known to use an elastic waist system in the leg openings of an absorbent article (*id.*). The Examiner concludes:

Therefore to provide an elastic system similar to that at the waist of Kato et al also around each of the leg hole of the Kato et al device would be obvious to one of ordinary skill in the art in view of the recognition that such a feature would provide similar benefits thereto, i.e. contribute to the comfort of the fit and ease of use, as is well known in the art as illustrated by [Kimberly-Clark] and Daniels, and the desire of such by Kato et al.

(*Id.*).

Appellant argues that the elastic structure described by Daniels around its leg-holes does not meet the elastic zone structure required by claim 8 (App. Br. 14).

This argument is not persuasive. The Examiner relied on Daniels for its teaching that it was well-known to include elastic around leg holes (Ans. 6 as quoted above), not for its teaching of a particular elastic zone structure, for which the Examiner relied on Kato. As Appellant does not identify a deficiency in the Examiner's reason to combine Kato with Kimberly-Clark and Daniels, and we find none, we affirm the rejection for the reasons given by the Examiner.

### CONCLUSIONS OF LAW

Kato describes a disposable diaper having a "covering zone further including a terminal longitudinal edge which coincides with terminal longitudinal edges of each of said topsheet and backsheet" as in claim 1. We affirm the rejection of claim 1. Claims 2-6 incorporate all the limitations of

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claim 1, were not separately argued, and therefore fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

We affirm the rejection of claim 8.

#### TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

#### AFFIRMED

LP

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